DOCUMENT RESUME

ED 226 179 CE 035 036

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TITLE Inservice Teacher Education for Vocational Special Needs Personnel.
PUB DATE 4 Dec 82
NOTE 10p.; Paper presented at the American Vocational Association Convention (St. Louis, MO, December 4, 1982).
PUB TYPE Viewpoints (120) -- Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attitude Change; Competence; *Disabilities; Educational Research; Graduate Study; Higher Education; Individual Needs; *Inservice Teacher Education; *Mainstreaming; Preservice Teacher Education; *Program Effectiveness; Program Evaluation; Secondary Education; Special Education; Teacher Attitudes; Teacher Workshops; Teaching Methods; Teaching Skills; Vocational Education; *Vocational Education Teachers
IDENTIFIERS *Texas

ABSTRACT

In Texas, inservice and preservice education has been mandated for teacher certification. This education covers least restrictive environment, characteristics of handicapped students, informal assessment, and individualized educational programs. The training provided has taken many forms--statewide conferences, school district inservice, retreats, technical assistance, self instructional modules, and a statewide lending library. A typical workshop for both special and vocational educators might include pre- and post-tests, an informative presentation, interaction with a handicapped person, a film, a participatory activity, and a question-and-answer session. Several research projects have assessed the effectiveness of such programs. A Competency Inventory on Vocational Education for the Handicapped has been developed to measure a broad body of knowledge. Another study has compared preservice and inservice education to determine which was more effective in positively modifying attitudes of vocational educators working with mainstreamed handicapped students. Findings are that teacher inservice workshops are the most effective method of modifying attitudes; infusing information into existing vocational education courses is the least effective. Inservice seminars to graduate courses and to public school systems have also been proven effective. (YLB)

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INSERVICE TEACHER EDUCATION FOR VOCATIONAL SPECIAL NEEDS PERSONNEL

A Paper Presented to the AVERA/AVEPDA
Joint General Session of AVA
St. Louis, Missouri

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December 4, 1982

CE035036

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INSERVICE TEACHER EDUCATION FOR VOCATIONAL SPECIAL NEEDS PERSONNEL

Since the passage of P.L. 94-142, The Education for All Handicapped Children's Act, and P.L. 94-482, The Educational Amendments of 1976, the Vocational Special Needs Program at Texas A&M University has been charged with personnel training for vocational teachers and administrators in the state of Texas.

Inservice and preservice was mandated by the Texas Education Agency (TEA). For example, any college student who wished to be certified to teach in our state, whether a vocational, academic, or P.E. teacher, must have had exposure in their undergraduate curriculum that included the following:

1. Knowledge of the concepts of least restrictive alternatives and its implications for the instruction process.
2. Knowledge of the characteristics and learning differences of handicapped students.
3. Knowledge of informal assessment and the variety of instructional techniques and procedures for implementing the educational plan for handicapped students.
4. Knowledge of the admission, review and dismissal process, and the individualized educational programs for handicapped students.

Likewise, all teachers and administrators already in the schools were required to document eight hours of inservice yearly regarding information and/or experiences relating to educating handicapped students.

Obviously with these types of requirements, inservice and preservice providers in our state had a challenge. The training we have provided has taken many forms. We have:

1. provided yearly statewide conferences, bringing in national leaders in the field, as well as allowing local districts and state education agency people to display information about their own programs;
2. provided individual inservice to school districts;
3. trained teacher educators in retreat settings to infuse information regarding the inclusion of handicapped students in their graduate and undergraduate programs;
4. provided technical assistance to post-secondary educators;
5. developed self-instructional modules (slide/tape/workbooks) and disseminated them to all 20 regional service centers in Texas;
6. developed and maintained a statewide lending library of materials to assist vocational teachers who instruct handicapped students; and, finally,
7. trained state education agency personnel, both vocational and special educators, to value each other's discipline and work cooperatively.

During the past seven years that my staff has provided this service for the state of Texas, we have witnessed the change of emphasis from a question of "Why?" (i.e., Why do we mainstream handicapped students into regular vocational classes?) to one of "How?" (i.e., How do you suggest I modify my curriculum, equipment, teaching technique to assist these students?).

Whereas we once focused on understanding legislation and litigation and evaluating and influencing attitudes, we now highlight successful programs, inform about recent publications, and instruct in techniques of vocational assessment. I would be dishonest if I failed to mention, however, that attitude adjustment still occupies much more of our time than I would like to admit.

A typical workshop agenda would include:

1. a pre-test (both cognitive and affective),
2. an information presentation (including visual as well as auditory methods of presentation),
3. interaction with a handicapped person,
4. an entertaining as well as informative 15-minute film,
5. a participatory activity,
6. a question and answer session, and
7. a post-test.

Conditions of the session include that both special and vocational educators attend in tandem.

To assess if anything is being accomplished during these sessions several research projects have been undertaken. Kenne Turner (1980) developed an instrument, CIVEH (Competency Inventory on Vocational Education for the Handicapped). Preparation of this instrument precipitated a review of literature. Turner found over 600 competency statements for vocational teachers to teach handicapped students in vocational education. Using the four domains as identified by TEA, and the general competency statements, Turner generated

150 test items to serve as the item pool. A panel of eight experts in vocational education and special education examined the list of items. Pilot testing reduced the list to 78 usable items.

Finally the CIVEH was administered to 13 preservice and/or inservice sample groups, and two control groups that did not possess the competencies which the test was designed to measure.

Through the use of factor analysis it was found that the CIVEH apparently measures a broad body of knowledge related to teaching handicapped students in vocational education. Using the Kuder-Richardson 20 (K-R 20) test for reliability, a .86 reliability was obtained for the 60-item test, with two subforms of 30 items each of the CIVEH having coefficients of .77 and .73. Using a dependent t test, a significant difference was found to exist between pre-test and post-test scores, indicating that the CIVEH is sensitive to instruction. By computing the correlation between scores on the CIVEH with the final course grades of individuals in a vocational special needs course, the resulting correlation coefficient of .52 (significant at the .05 level) provided a check for criterion related validity (Turner, December 1980).

Competency analysis is certainly one form of evaluation for inservice and preservice, but as already indicated, attitude analysis and change is another. Lindy McDaniel (1980) compared preservice and inservice education to determine which was more effective in positively modifying the attitudes of vocational educators working with mainstreamed handicapped students.

Two methods of preservice education and two methods of inservice education comprised the experimental groups for this study. The preservice education consisted of (a) undergraduate level vocational special needs courses,

and (b) vocational education courses with information on the handicapped infused into the existing program. The inservice education consisted of (a) teacher inservice workshops, and (b) graduate level vocational special needs courses. In addition, a control group was utilized consisting of vocational teachers and teacher trainees who had received no formal presentation of information on the handicapped. A pre-test was administered using the Attitudes Toward Disabled Persons scale (ATDP). Examples of questions on the ATDP are:

- Disabled people are usually easier to get along with than other people.
- Disabled people tend to keep to themselves much of the time.

The experimental groups then participated in either a vocational special needs inservice workshop (Group 1), a graduate level vocational special needs course (Group 2), an undergraduate level vocational special needs course (Group 3), or a vocational education course having information on the handicapped infused (Group 4). At the completion of the workshop or course, participants were post-tested using the ATDP.

Pre-tests and post-tests were then scored and a statistical analysis of the scores was conducted by means of the Statistical Analysis System (SAS).

Selected major findings included:

1. Attitudes can be modified by means of preservice and inservice education programs.
2. The most effective method of modifying attitudes is through teacher inservice workshops.

3. The least effective method of modifying attitudes is by infusing information on the handicapped into existing vocational education courses.
4. Undergraduate level vocational courses are more effective than graduate courses in modifying attitudes of vocational teachers toward the handicapped (McDaniel, 1980).

In another attempt to discern the effect of inservice just this year, 1981-82, I was commissioned by Texas Education Agency to present 36 inservice seminars to graduate classes at universities and public school systems. Always eager to obtain data, I collected pre- and post-tests regarding level of education, sex, occupational area, number of years taught, and prior experience with handicapped students. A copy of the instrument is attached. This 14-item, true/false test combined knowledge and attitude items (i.e., "An IEP is an individual education plan required for all handicapped students." and "Handicapped students present a safety hazard to others in vocational classes.").

We had data from 364 subjects, and after analyzing the data, we found a significant gain between pre- and post-test means. Other than the effect of the pre-test itself, the only significant variable, contributing to the gain in post-test scores, was that of educational level.

Finally, graduate courses, a form of inservice, must also be addressed. In response to many instructors at universities in various parts of the United States, I surveyed 23 vocational special needs teacher educators as to their courses, curriculum, readings and activities. The cumulation of this effort

resulted in a handbook, Instruction in Vocational Special Needs: A Resource for Teacher Educators (Parrish, 1980). Although this research effort took little creativity, its results have been the most popular to date.

Inservice education will continue -- techniques to plan, implement, and evaluate it must be continually upgraded.

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